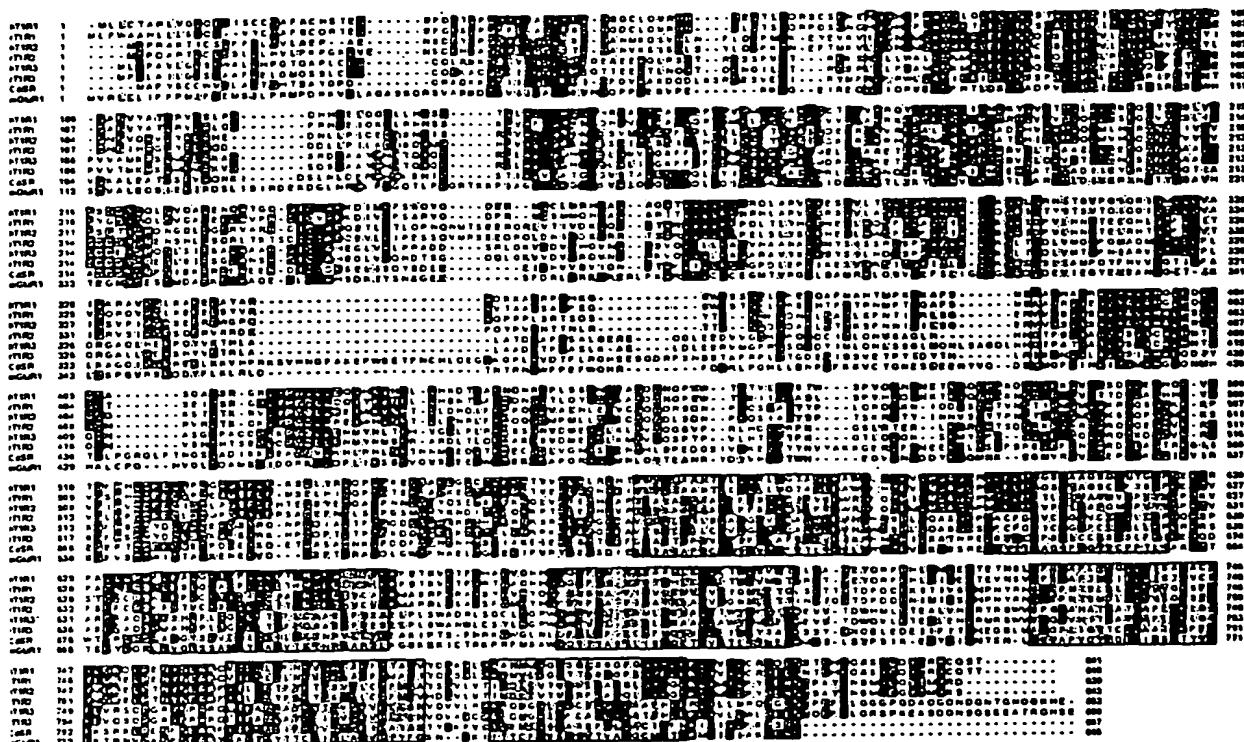


Figure 1: Catalog of human and rate T1Rs



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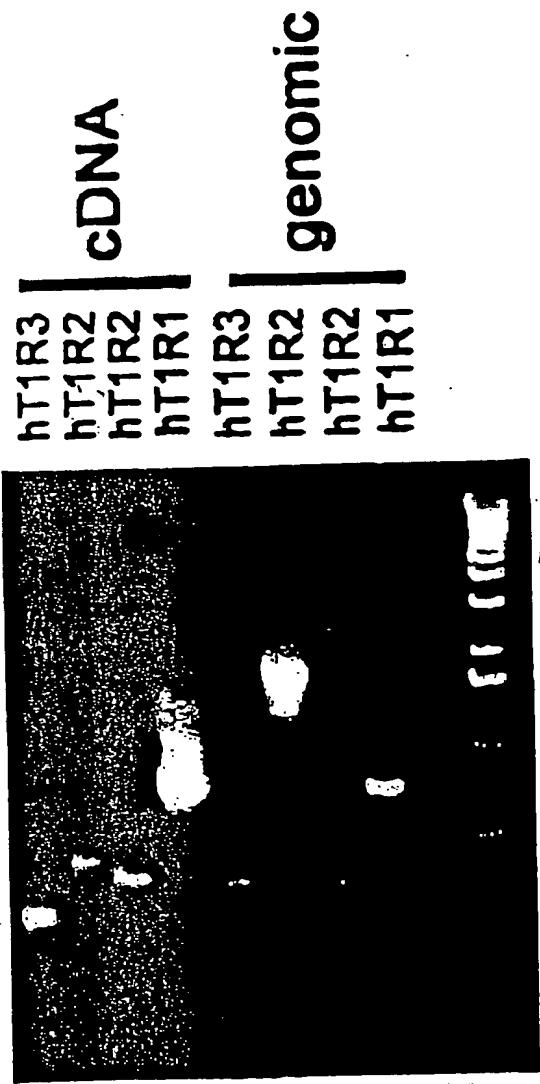
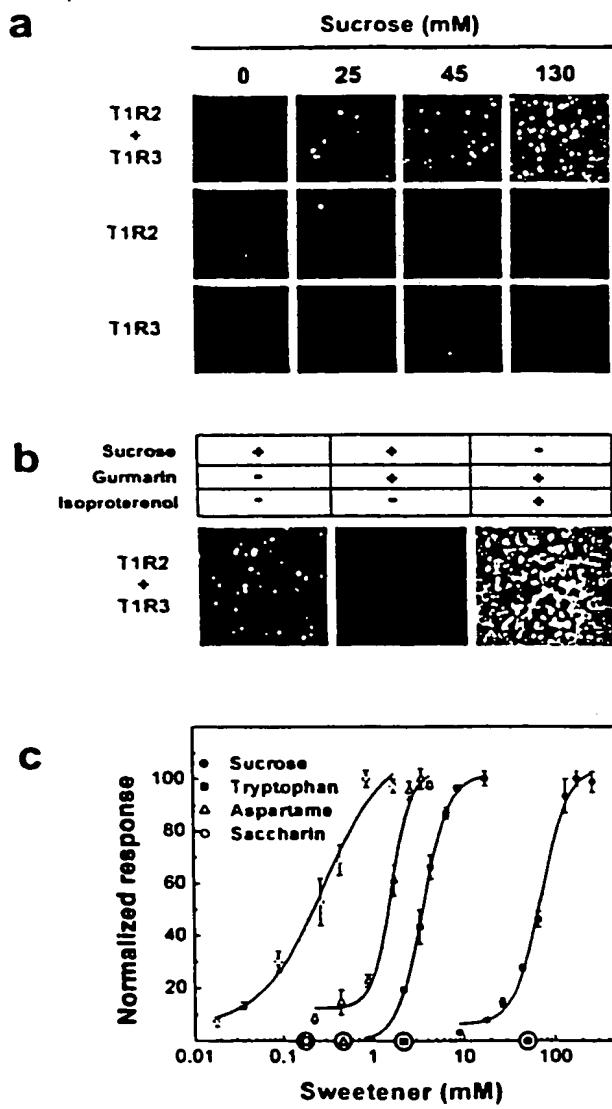


Figure 2 hT1R2 and hT1R3 are expressed in human tongue epithelium. cDNA-specific amplification products can be amplified from cDNA prepared from resected human circumvallate papillae.

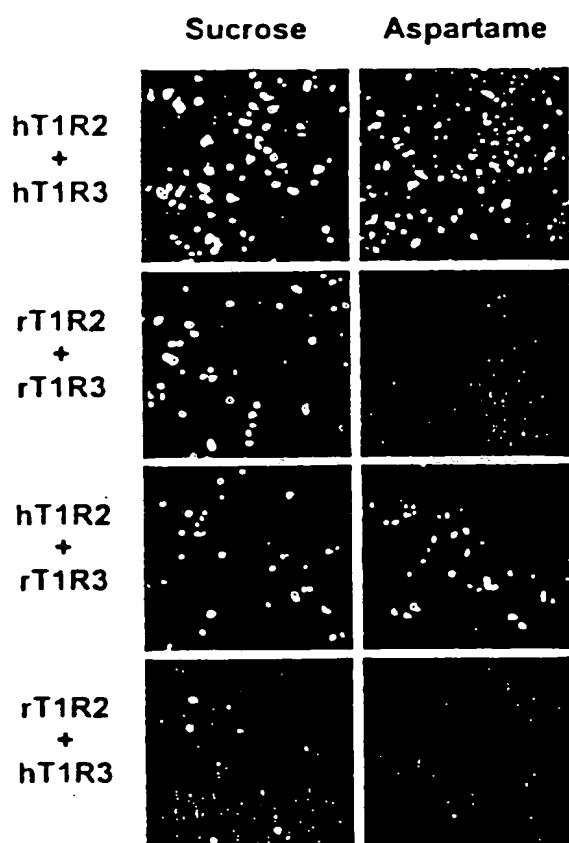
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Figure 3 Human T1R2/T1R3 functions as a sweet taste receptor



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Figure 4 T1R2 may control T1R2/T1R3 ligand specificity



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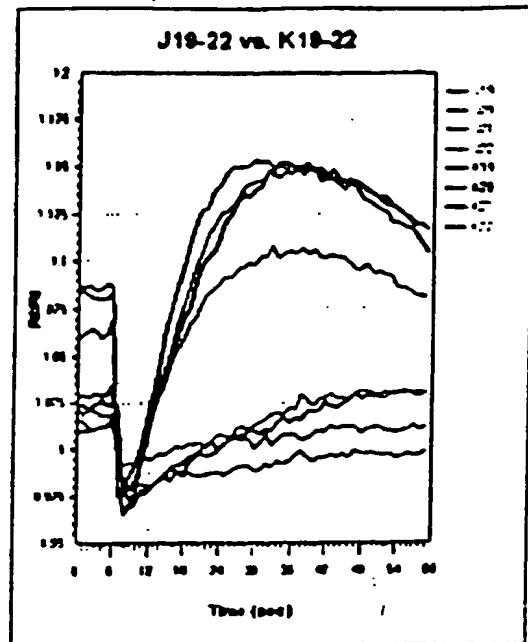


Figure 5

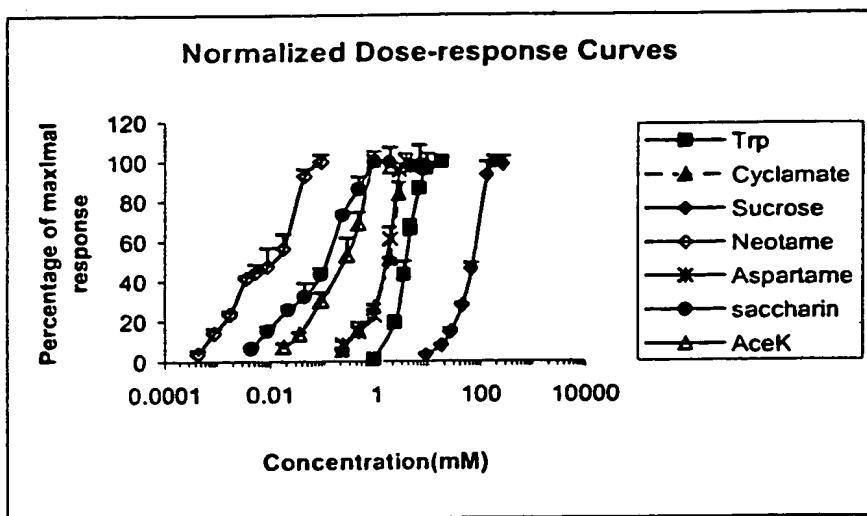
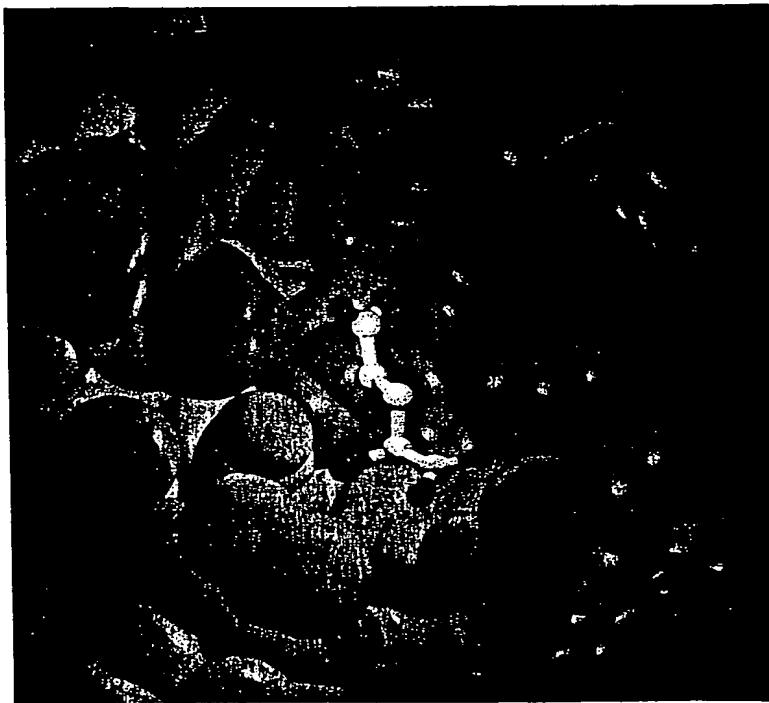


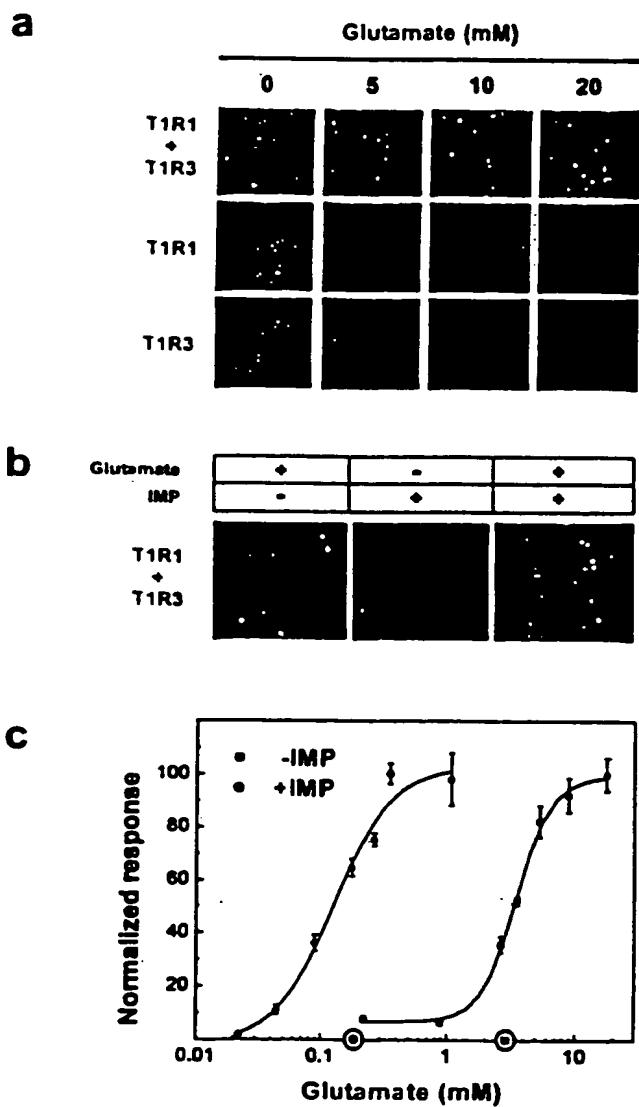
Figure 6

Figure 7 Key ligand-binding residues of mGlurR1 are conserved in T1R1



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Figure 8 Human T1R1/T1R3 functions as an umami taste receptor



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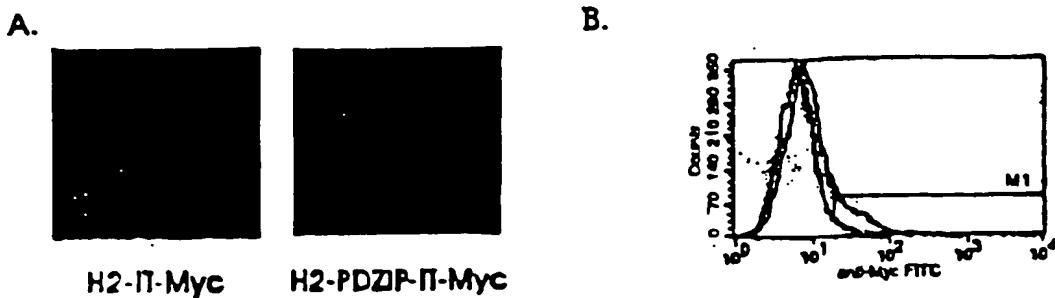
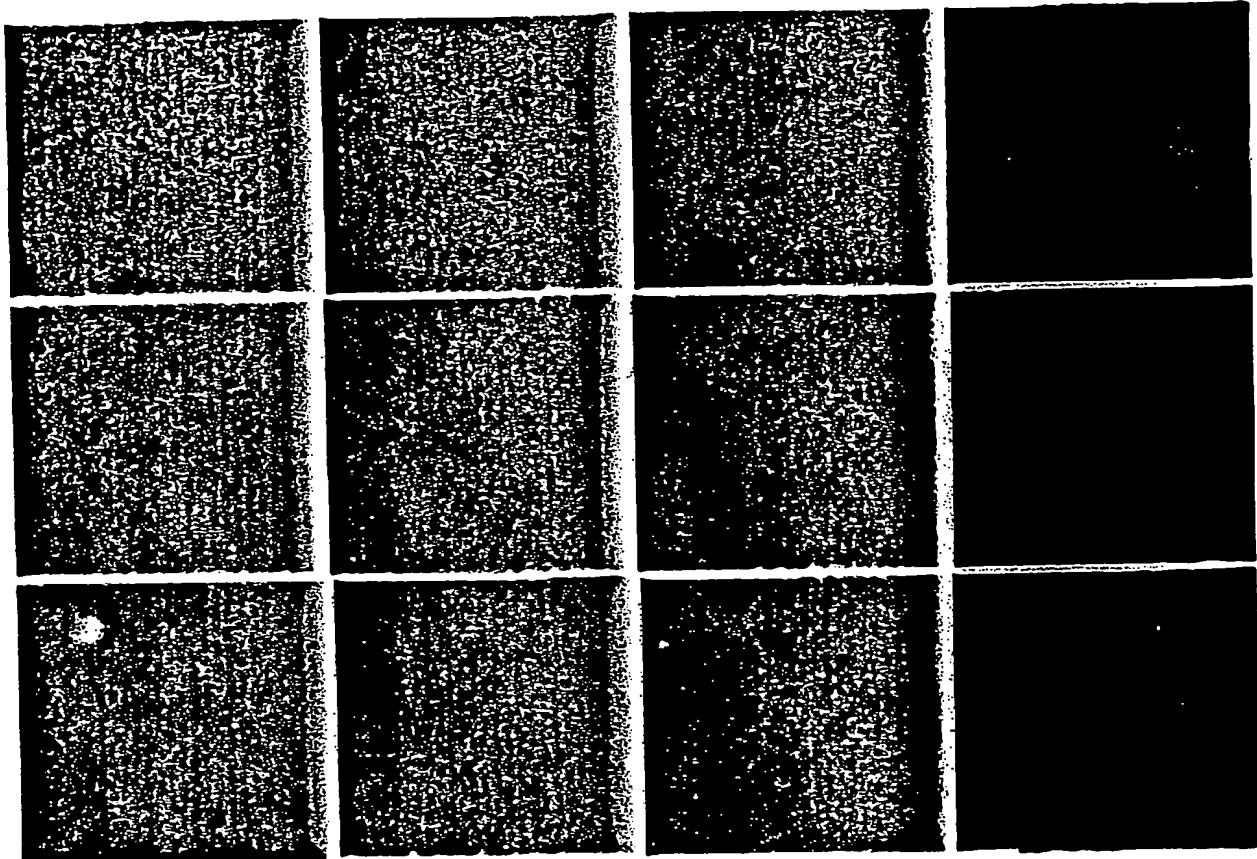


Figure 9 PDZIP facilitate the surface expression of human T1R2.

- A. Immunofluorescence staining of Myc-tagged hT1R2 indicates that PDZIP significantly increases the amount of human T1R2 protein on the plasma membrane.**
- B. FACS analysis data demonstrating the same result.**
Myc-tagged human T1R2: Green line. Myc-tagged
- C. human T1R2 with PDZIP: black line.**

Figure 10 Calcium-imaging data demonstrating hT1R2/hT1R3 responses to a number of sweet stimuli.



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Figure 11

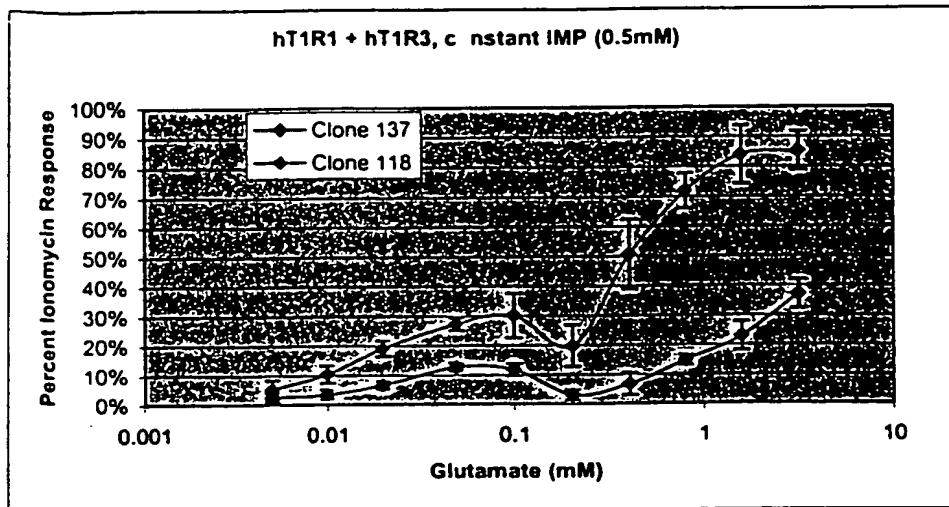
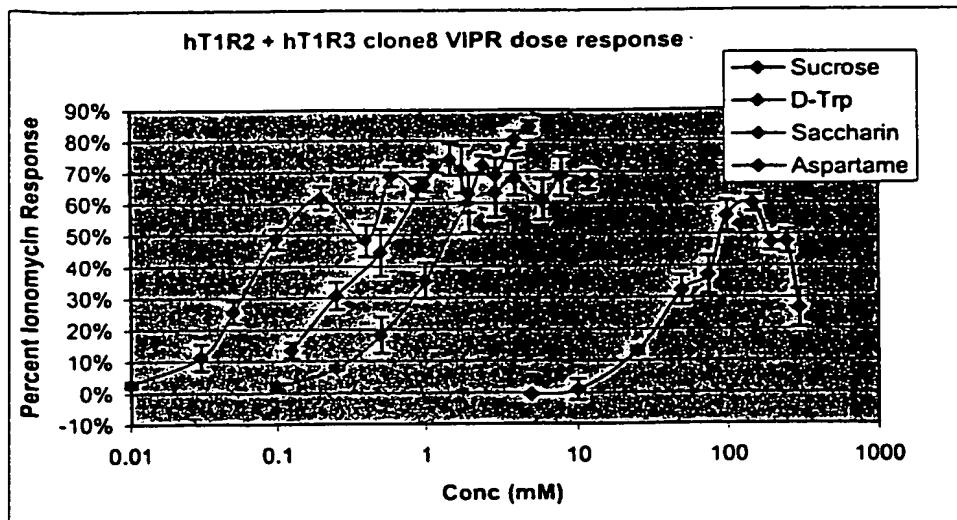
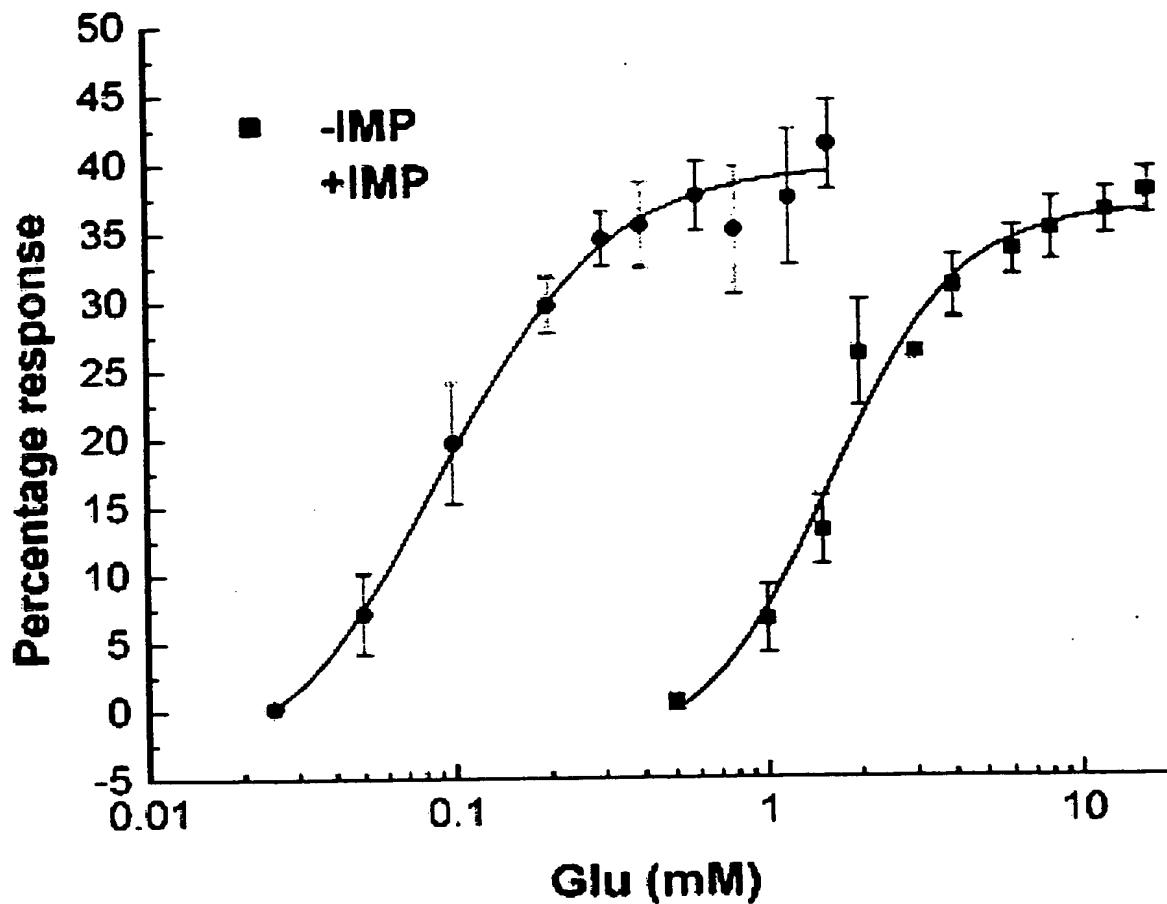


Figure 12



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Figure 13



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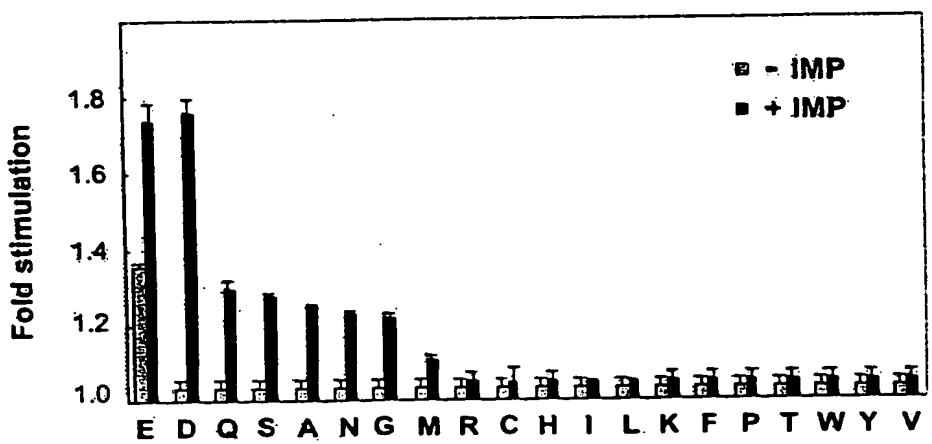


Figure 14

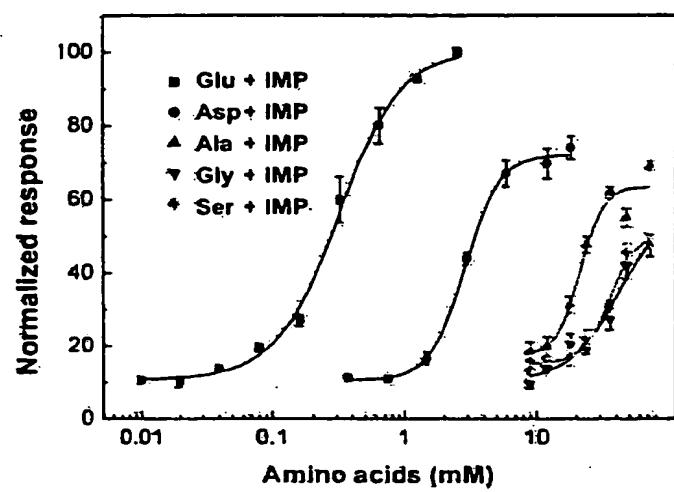


Figure 15

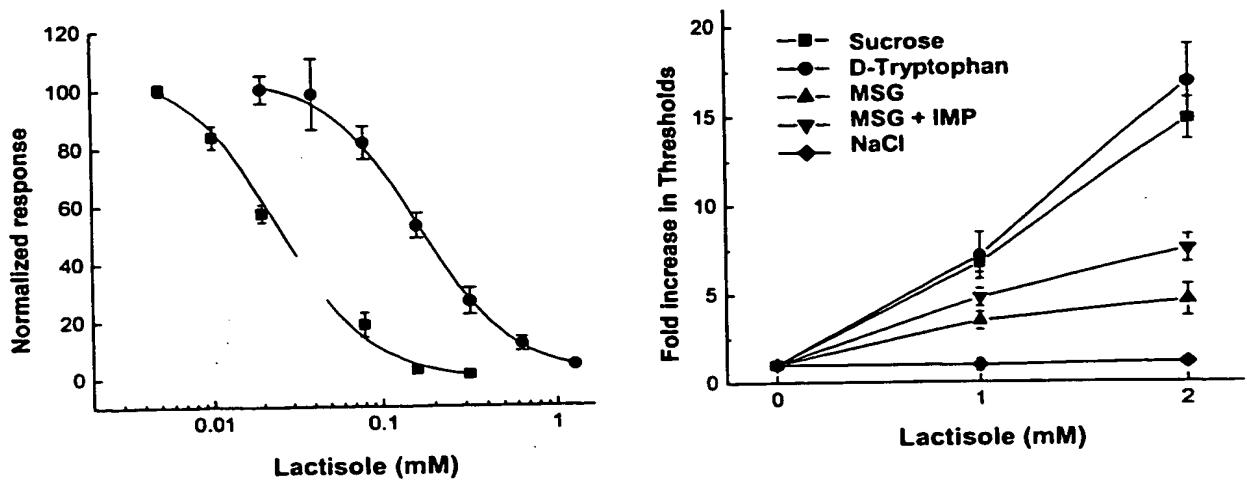


Figure 16 Lactisole inhibits the T1R2/T1R3 sweet and T1R1/T1R3 umami receptors and sweet and umami taste. (Left panel) responses of HEK-G_{a15} cells transiently transfected with T1R1/T1R3 (circles) to 10 mM L-glutamate and HEK-G_{a15} cells transiently transfected with T1R2/T1R3 (squares) to 150 mM sucrose in the presence of variable concentrations of lactisole are shown. (Right panel) fold increases in taste detection thresholds in the presence of 1 and 2 mM lactisole are shown for the sweet taste stimuli sucrose and D-tryptophan, the umami taste stimuli L-glutamate (MSG) and L-glutamate plus 0.2 mM IMP, and sodium chloride. Detection thresholds were determined following the method of Schiffman et al.